

SISTEM TERDISTRIBUSI

“Membuat Replikasi Master-Slave untuk Database MySQL atau MariaDB”



Disusun oleh :

Nama : Ar Rizky Aditya

NIM : 09011282126057

Kelas : SK 5B Indralaya

Dosen Pengampuh : Ahmad Heryanto, S.Kom, M.T.

Adi Hermansyah, S.Kom., M.T.

PROGRAM STUDI SISTEM KOMPUTER

FAKULTAS ILMU KOMPUTER

UNIVERSITAS SRIWIJAYA

PALEMBANG

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Perangkat yang digunakan pada percobaan replikasi:

1. Linux Mint
2. MySql / MariaDB
3. IP Master: 192.168.100.87
4. IP Slave: 192.168.100.86

Konfigurasi Server MariaDB Master

Ubah konfigurasi MariaDB pada CLI

```
# Instead of skip-networking the default is now to listen only on
# localhost which is more compatible and is not less secure
#bind-address      = 127.0.0.1
bind-address       = 192.168.100.87

#
# * Fine Tuning
#
```

```
File Edit View Search Terminal Help
GNU nano 6.2 /etc/mysql/mariadb.conf.d/50-server.cnf
# note: if you are setting up a replication slave, see README.Debian about
# other settings you may need to change.
server-id          = 1
log_bin            = /var/log/mysql/mysql-bin.log
#expire_logs_days  = 10
#max_binlog_size   = 100M
```

Buat user untuk akses replikasi

```
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 37
Server version: 10.6.16-MariaDB-0ubuntu0.22.04.1-log Ubuntu 22.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> GRANT REPLICATION SLAVE ON *.* TO 'replica2'@'192.168.100.86' IDENTIFIED BY 'secret2';
```



20:37

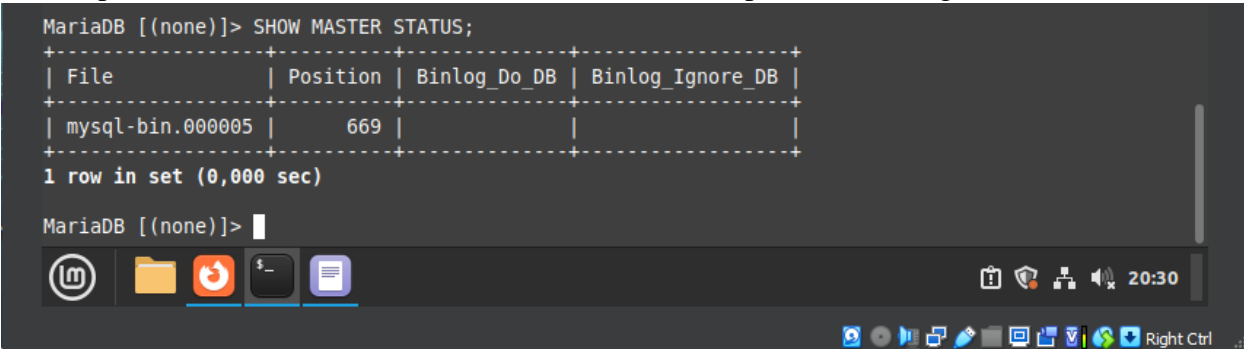
Kunci database agar tidak ada perubahan pada saat konfigurasi replikasi

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]>
MariaDB [(none)]> GRANT REPLICATION SLAVE ON *.* TO 'replica2'@'192.168.100.86' IDENTIFIED BY 'secret2';
MariaDB [(none)]>
MariaDB [(none)]> FLUSH PRIVILEGES;
```

Menampilkan status master. File dan Position dibutuhkan pada saat konfigurasi Slave.

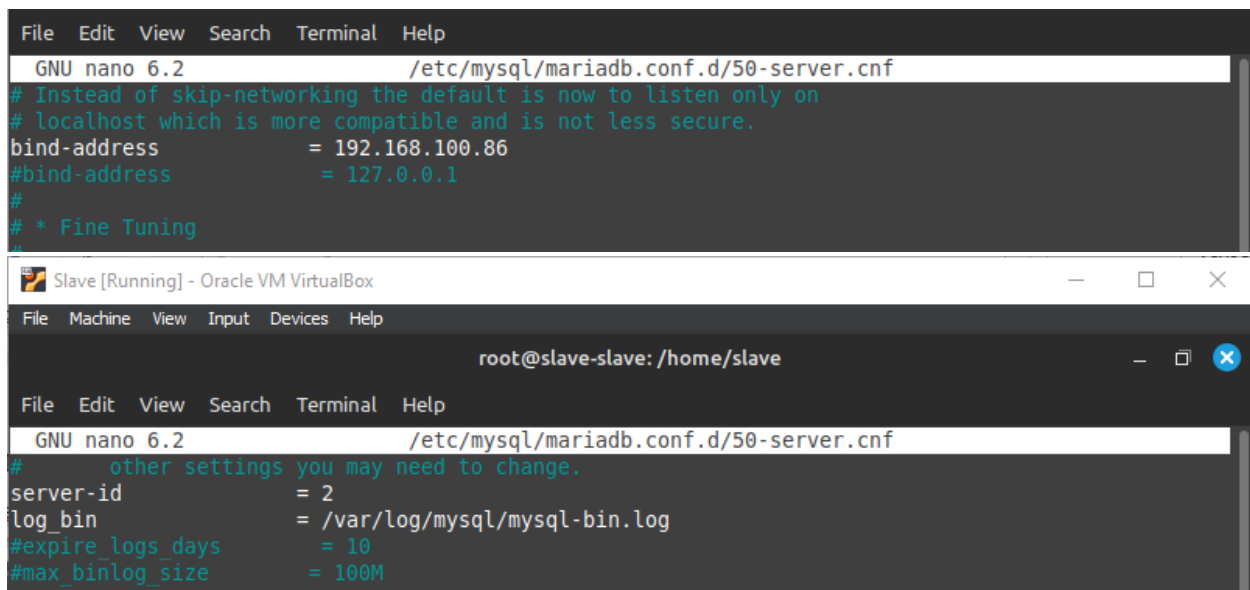
```
MariaDB [(none)]> SHOW MASTER STATUS;
+-----+-----+-----+-----+
| File           | Position | Binlog_Do_DB | Binlog_Ignore_DB |
+-----+-----+-----+-----+
| mysql-bin.000005 |      669 |               |                   |
+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [(none)]> |
```



Konfigurasi Server MariaDB Slave

Mengubah konfigurasi MariaDB



```
File Edit View Search Terminal Help
GNU nano 6.2 /etc/mysql/mariadb.conf.d/50-server.cnf
# Instead of skip-networking the default is now to listen only on
# localhost which is more compatible and is not less secure.
bind-address            = 192.168.100.86
#bind-address           = 127.0.0.1
#
# * Fine Tuning
#

Slave [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@slave-slave: /home/slave
File Edit View Search Terminal Help
GNU nano 6.2 /etc/mysql/mariadb.conf.d/50-server.cnf
# other settings you may need to change.
server-id               = 2
log_bin                 = /var/log/mysql/mysql-bin.log
#expire_logs_days       = 10
#max_binlog_size        = 100M
```

Konfigurasi koneksi ke Master

```
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 40
Server version: 10.6.16-MariaDB-0ubuntu0.22.04.1-log Ubuntu 22.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CHANGE MASTER TO MASTER_HOST='192.168.100.87',MASTER_USER='replica2',MASTER_PASSWORD='secret2',MASTER_LOG_FILE='mysql-bin.000005',MASTER_LOG_POS=669;
```

Jalankan slave dan Tampilkan status slave

```
Slave [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

root@slave-slave: /home/slave
File Edit View Search Terminal Help

MariaDB [(none)]> SHOW SLAVE STATUS\G;
***** 1. row *****
Slave_IO_State: Waiting for master to send event
Master_Host: 192.168.100.87
Master_User: replica2
Master_Port: 3306
Connect_Retry: 60
Master_Log_File: mysql-bin.000005
Read_Master_Log_Pos: 669
Relay_Log_File: mysqld-relay-bin.000002
Relay_Log_Pos: 555
Relay_Master_Log_File: mysql-bin.000005
Slave_IO_Running: Yes
Slave_SQL_Running: Yes
Replicate_Do_DB:
Replicate_Ignore_DB:
Replicate_Do_Table:
Replicate_Ignore_Table:
Replicate_Wild_Do_Table:
Replicate_Wild_Ignore_Table:
Last_Errno: 0
Last_Error:
Skip_Counter: 0
Exec_Master_Log_Pos: 669
Relay_Log_Space: 865
Until_Condition: None
Until_Log_File:
Until_Log_Pos: 0
Master_SSL_Allowed: No
```

Pengujian

Pembuatan Database CRUD Record Pada Server Master.

```
MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
| trix999 |
+-----+
5 rows in set (0,001 sec)
```

```
MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0,001 sec)
```

Setiap selesai menjalankan satu perintah pada server Master periksa server Slave apakah ada terjadi hal yang sama pada server Master.

```
MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
| trix999 |
+-----+
5 rows in set (0,002 sec)
```

Tampilan database pada Slave